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(71) Applicant
Corrado Francioni
Via Stendhal 7/A, 40128 Bologna, Italy

(72) Inventor
Corrado Francioni

(74) Agent and/or Address for Service
Marks & Clerk
Suite 301, Sunlight House, Quay Street, Manchester,
M3 3JY, United Kingdom

(54) Blanks for variable sized containers

(57) In a pair of blanks designed to make box-shaped containers of various different sizes each blank (1) features a plurality of sets of weakened lines (5) for tearing and (4) for folding, which define a polygonal base (6), side faces (8), and flaps (9).

FIG1

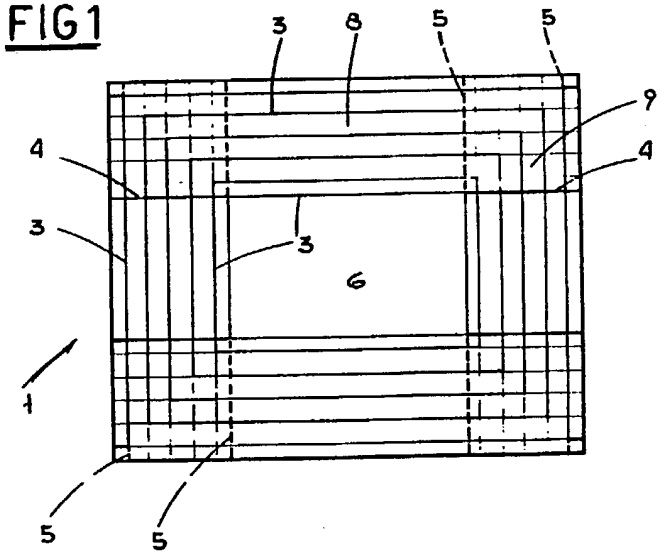

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FIG1

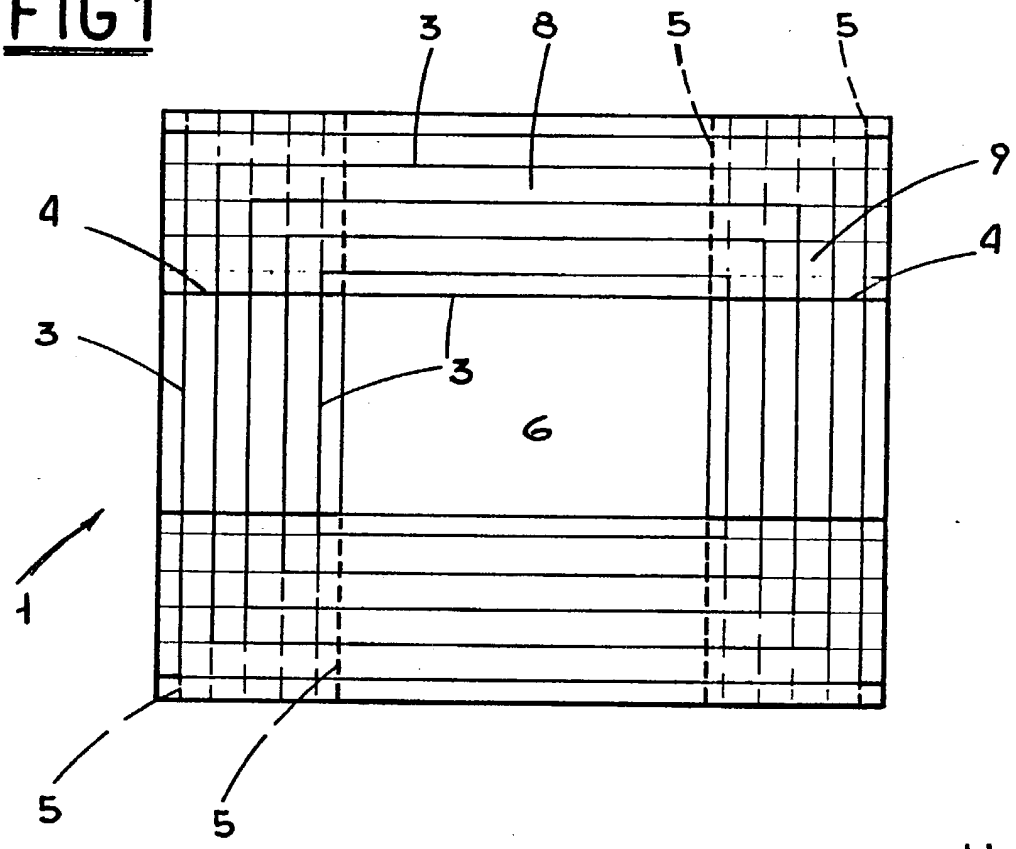

FIG2

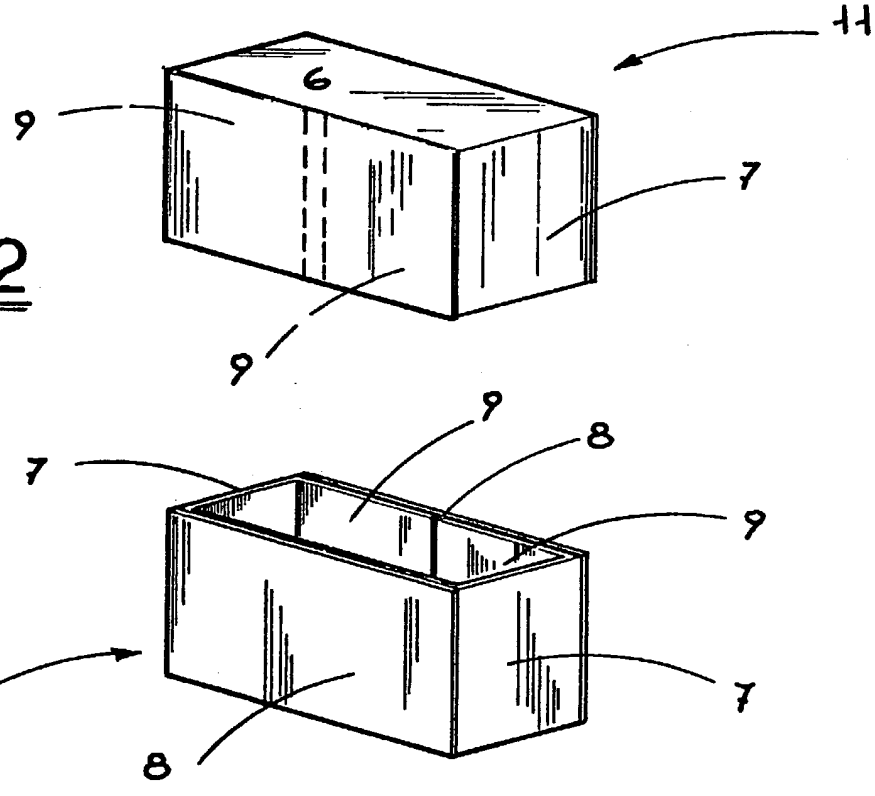

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FIG3

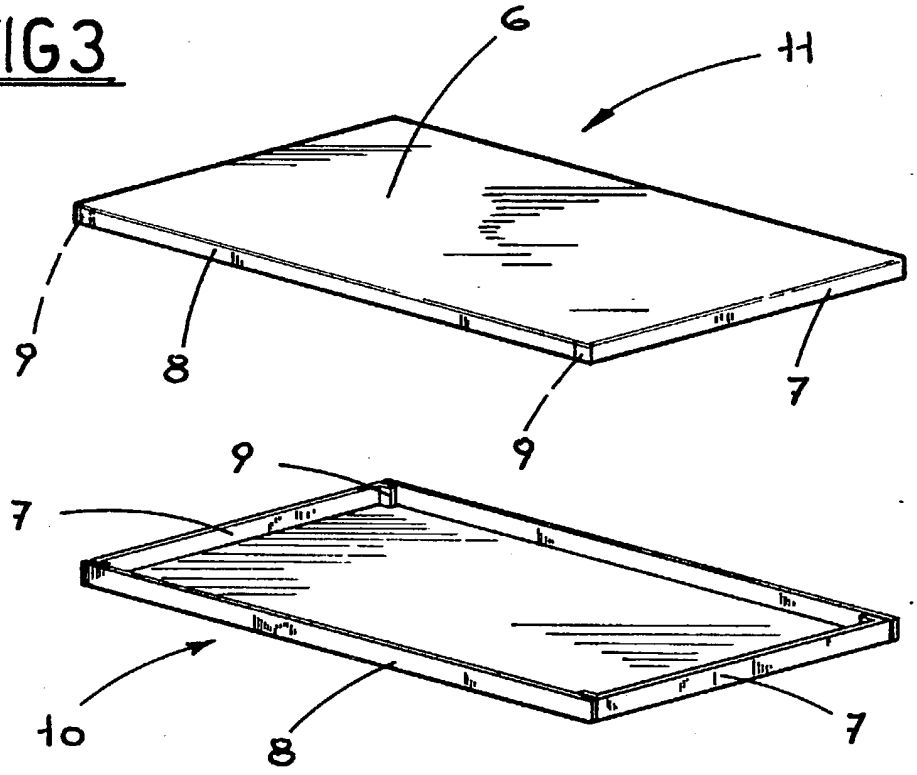
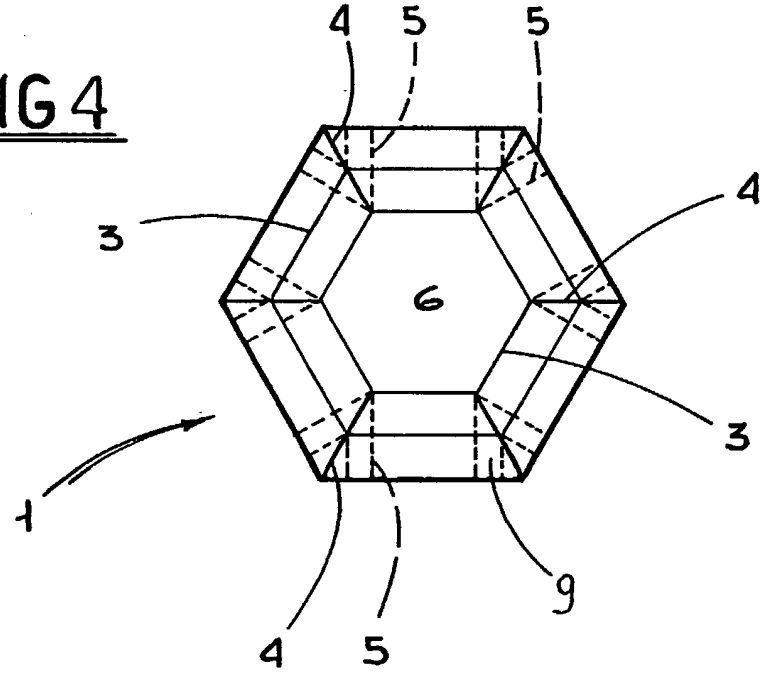


FIG4



Pair of blanks for making box-shaped containers of different sizes

The present invention relates to a pair of blanks designed to make box-shaped containers of various different sizes and consisting of a body and lid.

At present, the techniques for the preparation of blanks to make containers for items of various kinds, such as gift articles, for example, envisage a very high number of ready-to-use boxes of different sizes, each with a lid.

This means that the user must keep a large stock of boxes of different sizes.

Since such boxes are ready made and erected, they not only take up a large amount of storage space, but also involve time-consuming operations to store them neatly according to size so that they can be conveniently found when needed.

A similar problem arises with boxes to be despatched by parcel post. For this purpose, the market offers a wide variety of boxes ready to be erected and differing in size according to the dimensions of the items to be posted.

The aim of the present disclosure, therefore, is to

provide a pair of blanks that can be erected to form a box of the desired size according to the articles it is to contain. The disclosure as claimed herein solves the aforesaid problem with a pair of polygonal blanks featuring a plurality of sets of weakened, folding and tearing lines, each set defining a polygonal base similar in shape to the blank itself, as many side faces, and the same, or double, the number of flaps as there are sides to the polygonal base. The polygonal bases are defined by concentric weakened lines, whilst the side faces and flaps are defined by weakened lines extending from the corners of the polygonal bases.

One of the main advantages of the present invention is that the blanks require very little storage space (since there are only two different sizes, one for the container itself and one for the lid), and may be neatly stacked when laid out flat.

Another advantage is that no empty boxes remain unused to be thrown away when the articles of a certain size that they are designed to contain are finished, since the same pair of blanks may be used for articles of different sizes. Consequently, the user need not purchase boxes of many different sizes on the basis of sales forecasts for every different

size of article.

The advantages of the disclosure are highlighted in the following detailed description of its preferred, although not sole, embodiment, with reference to the accompanying drawings.

Figure 1 is a plan view of one of the blanks according to the present invention.

Figures 2 and 3 are perspective views of two possible containers that may be obtained with a pair of blanks such as that shown in Fig. 1.

Figure 4 is a plan view of a blank according to another embodiment of the present invention.

With reference to Fig.1, the pair of blanks according to the present invention -- only one of which, marked 1, is illustrated, since the two differ only in size -- consists of two rectangular blanks to obtain a box body 10 and related lid 11 (see Figs. 2 and 3).

Each blank has a plurality of sets of weakened lines 3 and 4 for folding, and 5 for tearing.

The said weakened lines 3, 4 and 5 are parallel and/or perpendicular to each other and each set of them defines a rectangular base 6, four side faces 7 and 8 and the same number of flaps 9 to make up a box body 10 or a related lid 11.

Bases 6 are defined by concentric, weakened folding lines, whilst side faces 7 and 8 are defined by folding lines 4 and tearing lines 5.

Flaps 9 extend bilaterally from two opposite side faces, for example, the small faces marked 7, and parallel to the said faces. This is necessary because, if the length of flaps 9, measured along the longer side of small face 7 which the said flaps project from, is greater than half the length of faces 7, the free edges of flaps 9 would overlap.

The weakened lines 3 of the blank that is to form lid 11 are longer than the corresponding concentric weak lines 3 of the blank that is to form the body of the box by an amount that is equal to, or a multiple of, the thickness of the latter blank, so that the lid 11 fits easily over the body of the box.

For clarity, Fig.1 shows in bold tearing lines 5 and folding lines 4, which enable box body 10 and related lid 11, illustrated in Fig. 2 and 3, respectively, to be made.

The procedure to make the said box and lid is as follows: The blanks are torn along tearing lines 5, and flaps 9 are then folded towards each other along weakened lines 4. Next, side faces 7 and 8 are

folded towards the centre of base 6 until flaps 9 come fully into contact with side face 8 (or 7, depending on where the tearing lines have been made, according to the size of flaps 9 and of faces 7 and 8). Finally, all that remains to be done is to attach flaps to face 8 (or 7) by known means, such as an adhesive.

Fig. 4 shows another embodiment of the invention wherein blanks 1 are polygonal instead of rectangular. In this case, bases 6 are polygons like the blanks themselves and there are as many side faces 7 as there are sides to the base 6.

Side faces 7 are defined by weakened folding and/or tearing lines 4 and 5, extending from the corners of polygonal base 6 at right angles to the sides of the base, that is to say, along the lines joining the corresponding corners of the weakened concentric lines 3 which define the polygonal bases 6 themselves.

While the invention has been described in connection with specific embodiments thereof, changes and modifications may be made therein without departing from the scope of the appended claims. In addition, all the details may be replaced by technically equivalent elements.

Claims

1) A pair of blanks for making box-shaped containers of different sizes of the type consisting of a container body and a related lid **wherein** each blank is polygonal in shape and features a plurality of sets of weakened lines for folding, and for tearing, parallel and/or perpendicular to each other, each set of weakened lines defining a polygonal base similar in shape to the blank , as many side faces , and the same or double the number of flaps , as there are sides to the polygonal base ; the said polygonal bases being defined by concentric, weakened folding lines ; the said side faces being defined by weakened lines for folding and/or for tearing, extending from the corners of the respective polygonal base at right angles to the sides of the base itself, that is to say along the lines joining the corresponding

corners of the weakened, concentric lines which define the said polygonal bases ; the said flaps being defined at least by the weakened lines which define the aforesaid side faces and extending between consecutive side faces which they eventually placed completely or partially in contact with; the concentric weakened lines that define the aforesaid polygonal bases of the blank that is to form the box lid being longer than the corresponding weakened concentric lines of the blank that is to form the body of the box by an amount that is equal to, or a multiple of, the thickness of the latter blank .

2) A pair of blanks for making box-shaped containers of different sizes of the type consisting of a container body and a related lid **wherein** each blank is rectangular in shape and features a plurality of sets of weakened lines for folding, and for tearing, parallel and/or perpendicular to each other, each set of weakened lines defining a

rectangular base similar in shape to the blank , four side faces and four flaps to make up a box body or a related lid (11); the said rectangular bases being defined by concentric, weakened folding lines ; the said side faces being defined by weakened lines (4) for folding and/or for tearing, extending from the corners of the respective rectangular base at right angles to the sides of the base itself; the said flaps extending bilaterally from two opposite side faces, and parallelly to the said faces for a length that is less than half the length of the said side faces which they are eventually placed completely in contact with; the concentric weakened lines that define the aforesaid rectangular bases of the blank that is to form the box lid being longer than the corresponding weakened concentric lines of the blank that is to form the body of the box by an amount that is equal to, or a multiple of, the thickness of the latter blank .

3) A pair of blanks as in the previous claims and as described and illustrated herein with reference to the accompanying drawings and for the objects stated herein.

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